

Splenic
fever
Charbon

Anthrax

1870

Zoonotic

use
gle

Def

Peracute / acute highly fatal ^{diseased} Septicemic * Caused by spores of *Bacillus anthracis*
Ch by sudden death Short Co
dark tarry blood from all natural orifices Not clot
mouth
nose
anus
vulva

C-agent *B. anthracis*
G+ve rods

Spores remain in soil upto 60 years

Soil borne disease as Clostridia

- Spores present in center of bacilli
- Capsulated (Virulent factor contain Poly D glutamic acid) Anti Phagocytosis

Virulent factors

3 factors

edema factor
Protective antigen
lethal factor

Virulent factors
Toxin Proteins

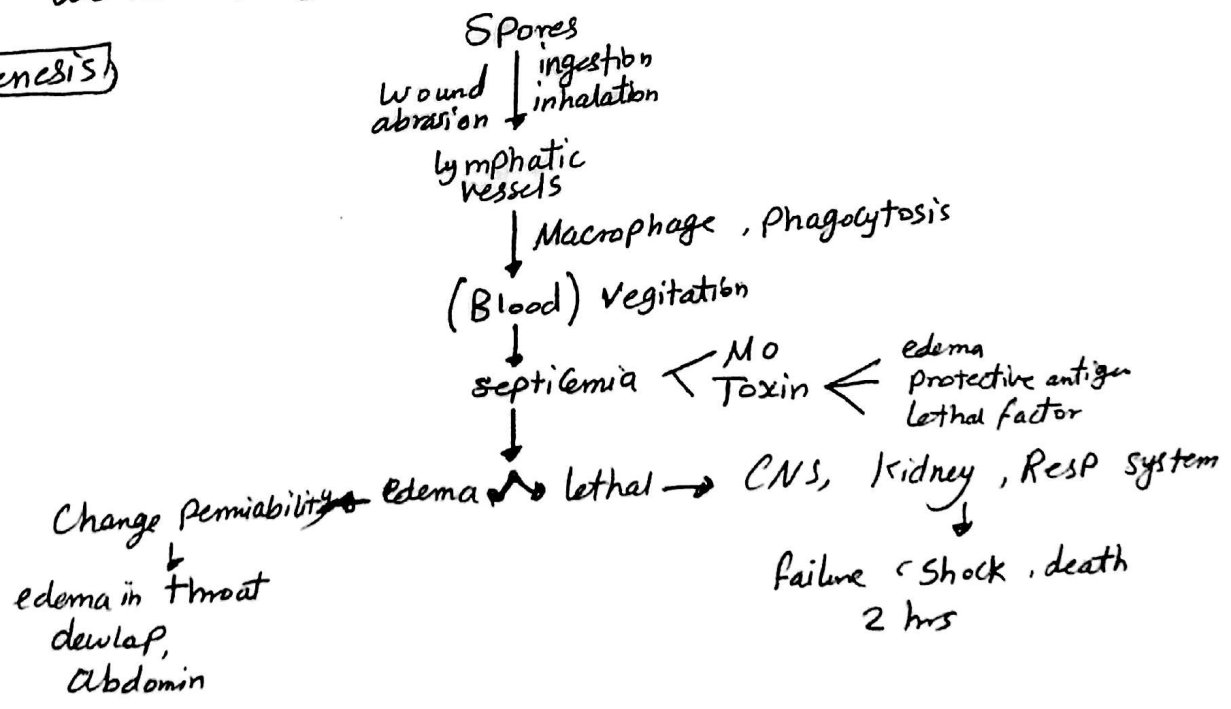
Hosts

All warm blooded animals & Human
peracute in sheep
all sexes, breeds

MoT

wound / ingestion / inhalation

Pathogenesis



C-signs

Peracute : Sudden death without
dark tarry blood from natural orifices Not clot
rigor mortis not occur
rapid decomposition

Acute septicemia / fever / edema in throat + dewlap rabdemin
staggering gait / dyspnea
after death dark as peracute

P.M

Spleen Splenomegally Large soft dark red
dark tarry blood from natural orifices
rigor mortis not occur
rapid decomposition

Diagnosis

Smears from Blood of natural orifices or ear vein
Gram stain → G+ve Bacilli

Blood film vein puncture → Blood on slide → Methylene blue



red Capsule
Blue Bacilli

Macfadyean reaction

Blood agar Curled hair Colonies (Medusa head Colonies)

Serology Ascoli's test

Part of lesion of ear
+
5-10 parts of saline } → boiling → Centrifugation → filtration

a. filtrate

+
hyperimmune serum
of anthrax

→ 15 m → Precipitation
line

DD

Sudden death → Clostridial diseases

Septicemia → Salmonellosis

Prognosis

Bad

++

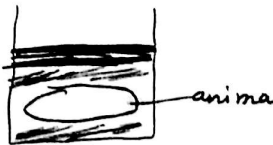
penicillin 10 000 IU / kg

Oxytetracycline 10 mg / kg

hyper immune serum

Control

- Notification
- P.M is not done
- Close all natural orifices by cotton
- ~~burning~~ / burying of animal in the same area
 - Quarantine of the farm
 - Stamping out



Vaccine

Pasteur ① & ② live attenuated

att at 42-43°C

Pasteur ①

att for 24 days

" ②

" 12 days

* Anthrax spore vaccine 1 ml / SIC
Killed

* bacterin killed

③

Caseous Lymphadenitis

Pseudotuberculosis
~~Pseud~~ Cheesy gland

Def Chronic debilitating disease caused by Corynebacterium pseudotuberculosis
 ch by ~~abscesses~~ abscesses in superficial Ln (superficial form)
thin ewe syndrome (internal form) — (Ch) →
 • abscesses in internal organs (lung acute bronchopneumonia
liver, kidney, udder, brain, spinal cord (nervous manifestation)
Mediastinal mesenteric lymph nodes)

C-agent

C. Pseudotuberculosis

- Camel, sheep, goat → Caseous lymphadenitis
- Cattle, horse → Ulcerative lymphangitis
- horse → Contagious acne ~~التهاب~~
- Buffalo → edematous skin disease

— G+ve rods straight or curved
Chinese litter arrangement

Virulent factor PLD (Phospholipase D) lethal for Lab a

on Blood agar $\xrightarrow{48 \text{ hrs}}$ Smooth glistening → dry opaque
 Cream to orange

Resistance

in	<u>Soil</u>	remain	<u>8 months</u>
	<u>straw</u>		<u>2 months</u>
	in <u>purulent material</u>		<u>5 months</u>
in	<u>sheep dip</u>		<u>24 hrs</u>

موجود في الدم والبراز

Source

- Purulent material containing the MO
- Wound of Shearing
- Shelter or ground

Wound
 Anthrax
 C. Lymphadenitis
 Clostridia

(24)

MOT

Shearing, docking, Castration

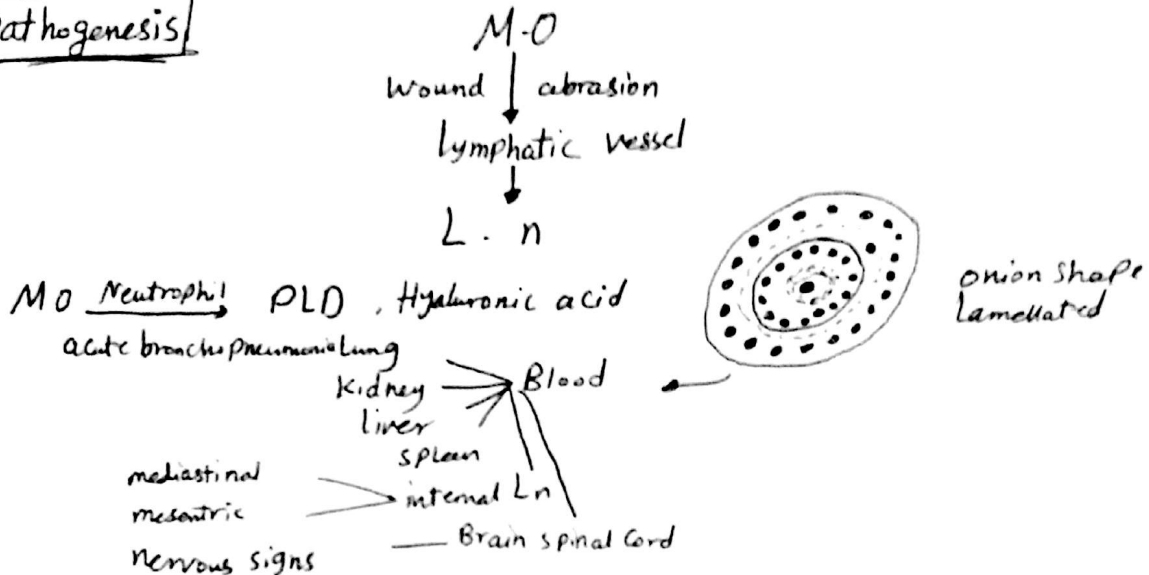
Host

Sheep goat, cattle

all breeds, sexes

Season → Not affect (at any season)

Pathogenesis



Economic losses

- Australia 20 million d in year through wool
- Abscess or internal organs, muscles → trimming of meat
- Cost of treatment & vaccination

Superficial Ln

Parotid, Submaxillary, Prescapular, Prefemoral

IIP

3 m

Course

months to years

Superficial forms
Internal form

abscess

pear size to lemon size
may reach orange size

in goat → abscess
mainly in head
(Parotid Ln)

Greenish Pus
↓
Creamy
↓
Cheesy

5

Internal form thin ewe syndrome

abscesses in internal organs - - -

P.M

Camel more than 3 years
neck
Prescapular

low mortality

emaciated

abscess in superficial Ln & internal organs & internal
Mediastinal
mesenteric

Diagnosis

C. signs P.M

History (abscess)

Samples → abscess

shearing Jar
abscess Jar

discard dead pus

Sample (swab) taken from pyogenic membrane

Pus → slide → Gram stain → G+ve rods
Chinese letters

Swab → blood agar $\frac{48}{hrs}$ Smooth glistening colonies → dry opaque
creamy

Biochemically

Catalase positive
Fermentation of glucose
Production of acids

Lab à vérifier
la présence de

Lab animal

IV in G. pig → abscess in lung, liver death 4-10 d

Serology

ELISA

Anti toxin (anti PLD) in serum

DD

T.B

tuberculin test
Acid fast

Actinobacillosis abscesses in cheek
woody tongue

Prognosis

Bad

⑥

III

Surgical → evaluation → H_2O_2 → Betadine

Penicillin 2000 IU/kg جمع الخراج من مكانه
for 3-5 days

Oxy 10 mg/kg 3-5 days

Sulphonamide 100-200 mg/kg 12 hrs 50-100 mg/kg 3-5 days

0.5-1 ml formaldehyde local infiltration → kill MO

avoid false infection عول باله
to avoid toxicity

Control

Shearing order

- animal has abscess → Sheared at end of day *
- avoid evaluation of pus on soil
- Shearing equipment disinfected by Betadine
- Sheppardip ~~not~~ not apply on infected sheep
- fly Control
- wound disinfection (during Shearing, docking, castra)
- Vaccine BCG toxoid

(7)

سكشن محدية: " 5 "

Tetanus = Lock Jaw.

Def:-

- Acute highly fatal toxemic disease

Caused by toxin of *C. tetani*

- infect all animals, human "fatal".

- Birds resist tetanus.

- dogs, cats rarely affected.

" hyperesthesia "

↳ Tetanic Convulsion spasms.

↳ Death

- Toxins:-

Tetanospasmin.

, Tetanolysine

" neurotoxin "

" haemolysin "

المسؤول عن الأعراض

↳ haemolysis of blood agar.

N.B

- 1 mg of tetanospasmin can be lethal to 1 million mouse.

- soil borne disease → spore may remain in soil for 40 years.

- spores → Terminal → Drum stick appearance.

- gram +ve Bacilli

- Isolated on blood agar.

2E

1

Subject :

Date | |

- spores killed by :-

↳ direct sunlight 12 days.

↳ H_2O_2 30% → 10 minutes.

↳ silver nitrate 1% → 1 minute.

↳ Carbollic acid 5% → 15 minutes.

↳ formaline 3% → 24 hrs.

[N.B] Idiopathic tetanus.

* No superficial wound → Parasites make ulceration in GIT → vegetative form → Tetanospasmin.

- spores present Commensal in GIT of humans, equine.

• MoT :-

- Deep puncture wound for anaerobic Condition.

- Out break : → mostly sporadic.

• may occur when injection by contaminated syring vaccine for large number!

- After shearing, Docking, Castration

- Marking, dehorning.

- Umbilical Cord. "young animals"

"Tetanus neonatorum".

[*] soil → source of infection.

- Susceptibility :-

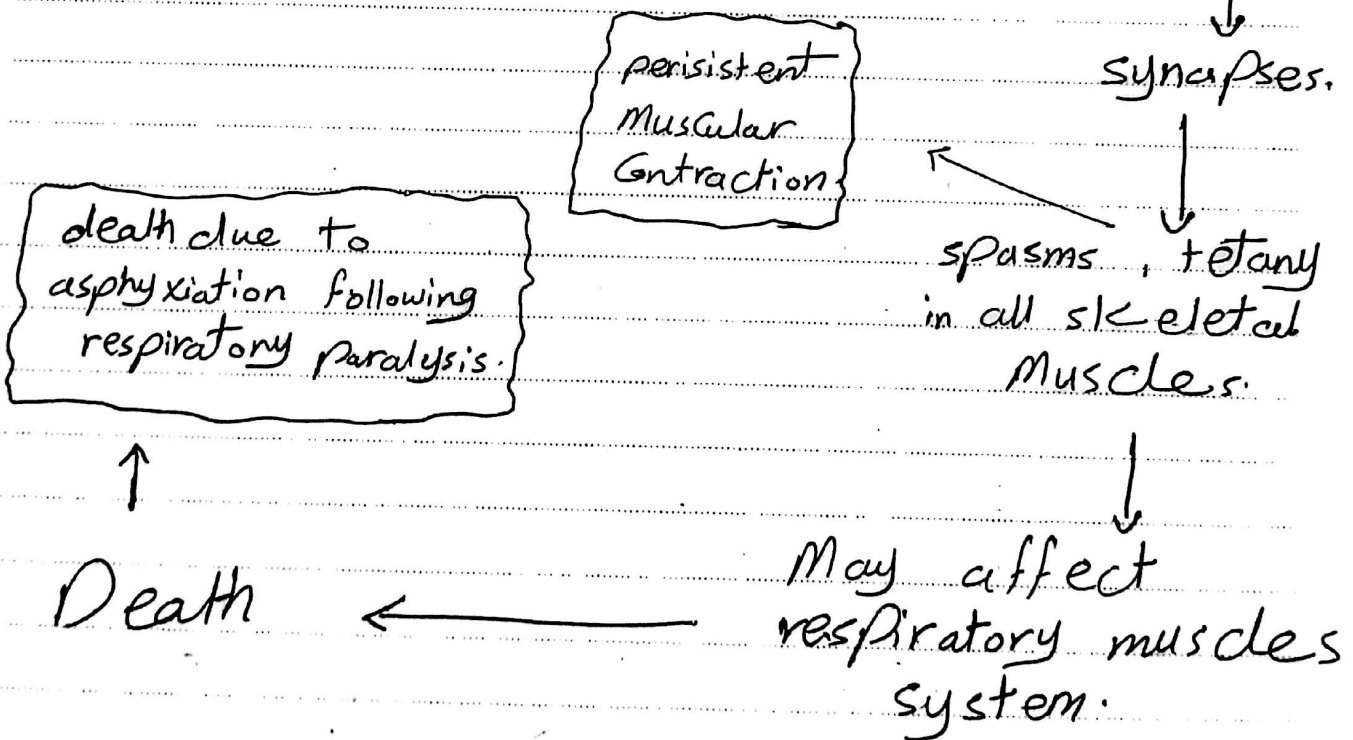
- Equine, human > sheep, > Cattle > dog, goat 90% Cat
- > Birds
- "resistant."
- affect all ages, sexes, breeds.

- Economic losses :-

- cost of treatment.
- Deaths.

- Pathogenesis :-

spores in soil → deep Puncture wound → vegetation "vegetative form" → Blood lymph → CNS



Subject :

Date | |

Signs :-

IP. → 3-10 days.

Bad prognosis. but If 3w. good prognosis.

- wound in head "near CNS"
- short IP "nervous signs"
- Tympani in ruminants
- Fever.

لوشت ای
حاجه من دی
متاکش ← مش
هیجیه نتیجه

lock jaw paralysis of swallowing → saliva
go to lung → drenching pneumonia
Fever

- lateral recumbancy.

N.B:- healing وکان فيه spore ورحط
وال spore موجود ← هتخبط الحوی

Course :- 5-10 day → Cattle - horse.
sheep die in 3rd day.

Signs :-

[start Cranio Caudally
recovery Caudo cranially.]

- erected ear
- prolapse of 3rd eye lid.
- flaring in nostriles.
- stiffness in gait
- erection in tail.
- salivation.
- Constipation and urine retention.

- Saw horse position.
 - ↳ extension of forelimb.
 - ↳ flexion of hind limb.

N.B :- Saw horse position in:-

- Tetanus.
- Equine encephalomyelitis.

- P.M. - superficial wound.

- Diagnosis:-
 - signs :- history of wound.
 - ↳ non-vaccinated.
 - ↳ recent obstetrical.
 - Lab diagnosis:-
 - smear from exudate of wound.
 - Gram stain → gram +ve bacilli → drum stick appearance.
 - Blood agar → haemolysis.
 - ↳ 37°C / 3-4 days.

- Toxin - anti toxin neutral

Two mice → 750 IU of anti tetanic serum SIC $\xrightarrow{2hr}$ 25ml of supernatant from 4-8 hrs cooked meat culture of suspected organism "toxin".

→ NO

Subject:

Date: / /

|| non-immu. ||

Then inject toxin $\begin{cases} \text{Antitoxin} \rightarrow \text{dead.} \\ \text{No} \rightarrow \text{live.} \end{cases}$

- D.D:-

a. Equine:-

⊕ Azoturea \rightarrow - working - rest - working
- myoglobin urea.

⊕ laminitis \rightarrow Concentrate \rightarrow digital pulsation.

⊕ hypocalcemia \rightarrow respond to Ca therapy

b. sheep:-

⊕ Enterotoxemic disease.

c. Cattle:-

⊕ hypomagnesemia - hypocalcemia.
fits - after parturition
- respond to Ca.

- Prognosis: \rightarrow Bad. \rightarrow difficult tt need
Long period.

- Treatment:-

1. specific treatment:-

a. elimination of causative M.O.

b. neutralization of unfixed toxin.

Ⓐ penicillin:-

penstrep slon.

Morocillin LA

كل يوم

يوم و يوم و ٣ - ٥ يوم

1ml 125 Kg

I/M

2E

6

Subject:

Date: / /

Powder

vitrocin

streptopencide.

1200 000

2 gm.

↳ procaine penicilline.

400 000

↳ G. sodium penicilline.

Total 160 000 IU.

20000 IU / kg.

300 kg 6000 000 IU 4 ampules / day $\swarrow \searrow$ 2
16 ampules / 4 days.

R. X

vitrocin vial 12 vial

بجمل الامبول في الماء ويأخذ 2 امبول صباحاً و 2 امبول
مساءً ← I/M. ← 3 أيام

b - 225- 250 IU / kg.

البشري Ampule

300 kg

75000

1500 IU.

50 ampules.

R. X

Anti tetanic serum

150 ampule.

50 / day.

20 S/C

15 I/U

15 I/M around wound.

100 IU

in ml.

150 IU Anti البشري

in ml.

M.B →

متحققش أكثر من 70 مل في اليوم

(2E)

(7)

[2] Symptomatic treatment: -

- Xylazine HCL "Muscle relaxant".
- 5 - 1ml / 400 Kg in Cattle.
- 1ml / 20 Kg in horse.
- Curretting of wound after administration of antitoxin.
- Rectal enema.
- Catheterization.

[3] Nursing treatment: -

- stomach tube → for feeding.
- slinging.
- Put animal in wide dark place.
- Put gauze in ears.

- تطهير الأذن وإكوابها بمسحوق

- Control: -

* Prophylactic treatment when wound occur

"Castration - docking"

- horse → 1500 - 3000 IU / animal.
foal stallion.

- Cattle → 3000 - 7500 IU / animal.
Calf Cattle.

- sheep → 200 - 300 IU / animal.

* Disinfection of equipment.

Subject :

Date : / /

* Vaccine "Poly valent clostridial vaccine".

* Toxoid \rightarrow Alum precipitated Toxoid.
1ml S/C $\xrightarrow{4-6W}$ 1ml S/C.

booster each year.

* simultaneous administration :-

$\left. \begin{array}{l} \rightarrow \text{Toxoid} \\ \rightarrow \text{anti tetanic serum} \end{array} \right\} \rightarrow \text{In Two different places.}$

N.B :-

- \rightarrow Calizoc Makajadk
- Anti tetanic serum + Toxoid \rightarrow 1 year immunity
 - Anti tetanic serum only \rightarrow 14 day immunity

H & H



B

sec 6

* Equine infectious anemia = EIA = swamp fever

→ acute or chronic contagious viral disease of horse, donkeys, mules.

→ characterized by →

1- intermittent fever (م).

2- subcutaneous edema.

3- red bone marrow. (م)

بياً ثراً على الحديد في الجسم
→ thrombocytopenia.

- Etiology →

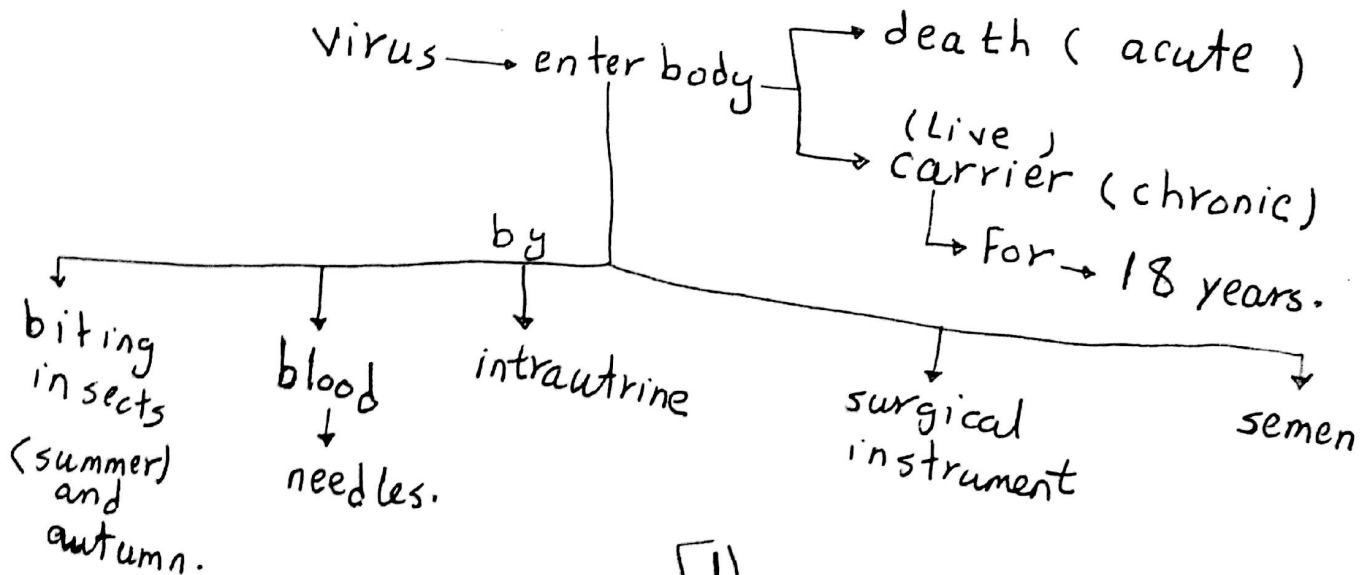
- cause → Retrovirus.

- has antigenic drift (تبدل)

الفيرس يتبدل، يغير من نفسه كل فترة لذلك يمكنه يحدى الحصان أكثر من مرة.

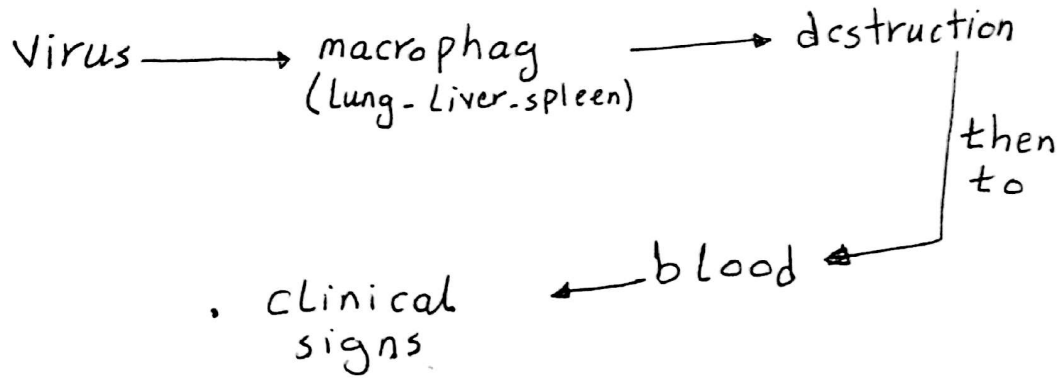
- inactivated by heat, detergents

- transmission →



[1]

Pathogenesis →



* Clinical signs →

الفيرس يدخل الجسم هيفل من ٢-٤ أسابيع وبعد ذلك الأعراض الأولية تظهر بعد ذلك الحيوان هيفل لمدة ٢-٣ أسابيع (مؤقتا) تحت أى ضغط الفيرس يحصل له (drift) و يبدأ يحصل recurrence.

* Primary signs (الأعراض الأولية) →

1. Fever (intermittent).
2. ataxia.
3. Jaundice
4. enlargement of spleen.
5. abortion.

* after 2-3 weeks →

↳ recurrence signs (due to drift).

1. intermittent Fever
2. odema in
 - ↳ abdomen.
 - ↳ Limb.
 - ↳ Prepuce.
3. Cardiac insufficiency.

* P.m →

1. Lymphadenitis (submaxillary L.N).

2. enlargement of → spleen
→ kidney
→ liver

3. red bone marrow

4. m.m → Jaundice.

* diagnosis →

1. Field diagnosis → case history
→ clinical signs
→ P.m

2. Lab diagnosis →

→ For virus isolation → citrated blood or
section of liver, spleen
kidney.

→ For serological examination
→ paired sera.

→ blood + anticoagulant
→ For Hb and PCV.

→ For histo pathology
→ sample from
Liver, spleen, kidney + 10% Formalin

[3]

↳ to detect carrier (only test)

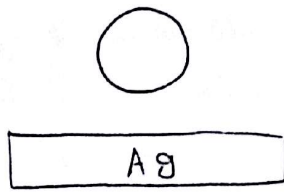
↳ Coggins test الكوغينز

= AG ID

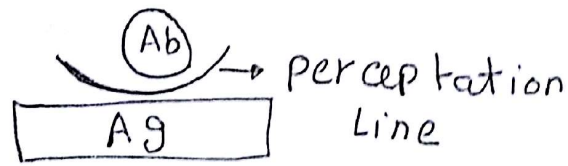


agar gel immune diffusion test

↳ depend on Ag - Ab reaction



-ve (Free)



+ve (carrier)

* treatment →

- no treatment
- only supportive
 - ↳ hematonic preparation
 - ↳ vit B complex.

* Prevention and control →

- 1- identification and destroying infected horses.
- 2- restriction of introduction of infected horses to clean area.
- 3- control of insect
- 4- avoid using of contaminated material.
- 5- vaccination → killed whole virus vaccine.

NB; there is cross reaction between EIA and Feline immune deficiency syndrome in cat and EIAIDS (الإيدز) in human.

Dourine (Du)

Date

Subject sec 7

Syn Equine syphilis, Breeding disease, Mal de cart
مرض السيل في الخيول

Def Chronic infect. disease of horse, donkey (Found in Egypt)

Etiology *Trypanosoma equiperdum*

- ↳ Reproduction by longitudinal binary fission in fluids of reproductive system, urethral plaques
- ↳ the only trypanosoma w/ transmit by coitus and not require vectors

Epidemiology

① S.o.I

↳ ♀ urethral discharge of infected stallion

↳ ♀ vaginal discharge of infected mare

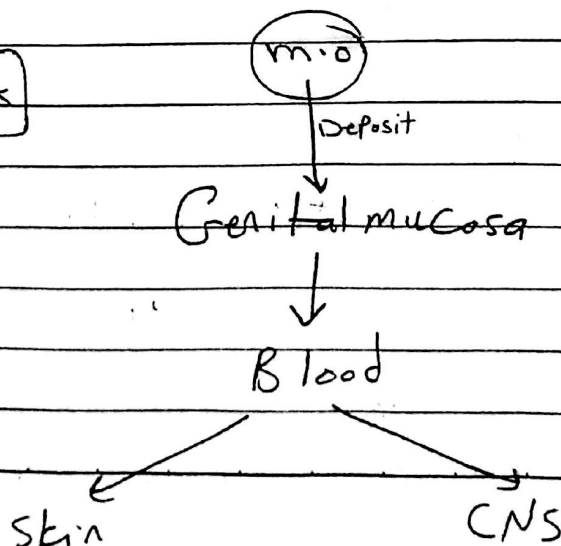
② M.o.t

↳ foals → take infection by contamination of nasal / conjunctival m.m with vaginal discharge of infected mare

↳ transmit to either sex during Mating*

③ Host Horses, Donkeys

Pathogenesis



baraka

Clinical Signs

Long IP, Long Course, Sporadic, ↑ case fatality rate (↑ 50%)

(A) Edema Stage

① mucoid vaginal or urethral discharge *

② Edema in genital organs

- ① → scrotum, prepuce
- extend forward till chest
- ② → vulva
- udder
- ventral abdomen

③ ulceration of genital mucosa leave Depigmented scar *

new scar notice is + sign more + (vulva) 1e

(B) urticarial stage

① urticarial plaques (2-10cm) in all parts of body
(esp) Flank

↳ Last only few hours

(C) Paralysis stage

① Loss of Condition

② Lameness

③ Muscle atrophy

④ nervous Manifestation

→ incoordination

→ Ataxia

→ Paralysis

(P.M)

① Emaciated, Anemic Carcass + signs

② Softening of spinal cord (Paralysis stage)

baraka

Diag.

① Field diagnosis ← Signs
P.M are diagnostic *

② Laboratory diagnosis

Sample vaginal discharge, urethral washing, S/C edema
Blood, fluid of antecornal plaques (if found)

② → Laboratory → intratesticular injection of blood in rabbit
جلب الدم من الخصيتين وحقنه في كيس الصفار في أرنب

② → CFT for detection of chronic carrier

↳ Disadv false +ve with → T. evansi
T. brucei

→ ELISA, FAT, ...

- ③ D.D
- ① Carpal exanthema (Non-mucoid vaginal discharge)
 - ② equine infectious anaemia (Icteric m., Coggins test) *
 - ③ Purpura hge (abscess in L.N (sub maxillary))
 - ④ Encephalomyelitis

III spec. for trypan is Suramin (not found in Egypt)
(7-10 mg/kg b.w) Slowly I/V

other III is Diminazine aceturate (Berenil, Trypanect, Intrepur)

(10.59 ml / 12.5 ml water) / 300 kg / I/M

Control

① Detection of Carriers by CFT

② III of all mares by Berenil at time of mating

③ Contact A consider free after

Successive 3 -ve CFT with month interval

Baraka

Habronemiasis

Date _____

Subject _____

[54a.] Summer Sore, Swamp Cancer

[Def] Chronic infect. disease

[Etiology] ① Habronema muscae
② " Megastoma
③ " microstoma

Vector

House fly (esp) musca domestica

stable fly (esp) stomoxys

Life Cycle

Adult present in stomach of equine
and cause gastric tumor
(granulomatous masses)

deposit egg in stomach

Larva excreted in
(L1) Feces

ingested by maggots
of House fly
stable fly

(Cutaneous habron.) Wound

(Conjunctival habron.) eye

(Gastric habron.) Lips

(Pulmonary habron.) stray
Larva (Lung)

(Gastric habron.) Food

deposit
larva
on

adult contain

Larva
(L3)

dead
Flies

Epidemiology

① M.O.T - ingestion of contaminated feed contain dead flies (infected with larvae)
- deposition of larva on lips, wounds, eye around

② Host - equine only (Horse, donkey, Mules, asses)

③ Susc. - Youngs are highly susceptible

baraka

Clinical Signs

① Gastric habronemiasis

* Depression, fever, Colic*, may Death if Perforation

② Cutaneous habronemiasis (summer sore, swamp cancer)

* Granulomatous masses (esp) around the head, Legs, urethra, withers
(Areas where horse can't remove Vector)*
Fly

* Lesion Doesn't heal spontaneously

* may ulcerate

③ Conjunctival habronemiasis :-

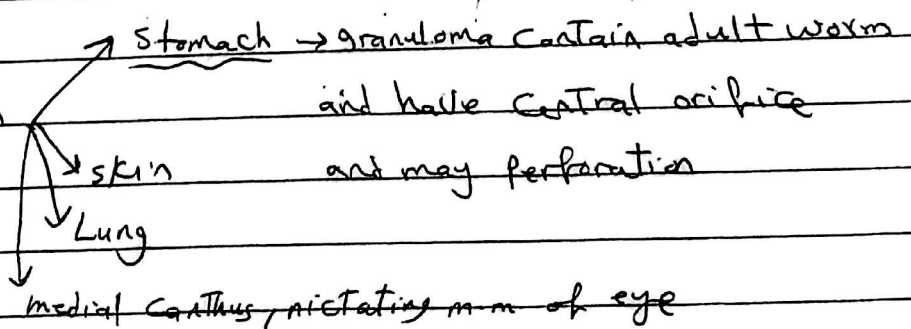
* granulomatous lesion (small, yellow necrotic masses 1mm in diameter)
under Conjunctiva may cause nasolacrimal duct (lacrimation)*

* soreness

* Lacrimation (profuse)

P.M

Granulomatous lesion



Diag.

① Field diagnosis [seasonal incidence]
in summer

② Lab. diagnosis

(sample) skin biopsy

baraka

③ Diff From fungal granulomata

- (Ht) ① Ivermectin (Ivomec) 2 mg/kg / SC
 Duramedin (Dextomax) 1 mL/50 kg / IM فرکتور
^{organophosphate}
 ② ~~OPR~~ (ex) Trichlorfon 25 mg/kg Dissolved in 1 Litre of
 5% Dextrose sol. / IV / 2 times
one week apart

③ Surgical removal

- ✓ ④ ocular habroaemia sis (b) Trichlorfon I/V (systemic)
 terramycin anti (topical)
 antinflammatory antibiotic

Prevention, Control

- ① Hygienic disposal of manure
- ② Control of fly
- ③ Skin wound should be Ht & protected against flies

(1)

* Strongylosis *

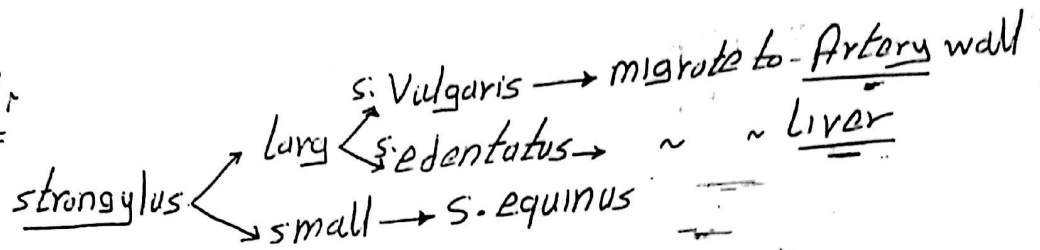
"Red worm infestation"

sec 8

def: parasitic n. affect large intestine of equine ch'by:

- 1) Verminous arteritis
- 2) colic
- 3) emaciation

Causative agent:



* need temp 25°C for hatching

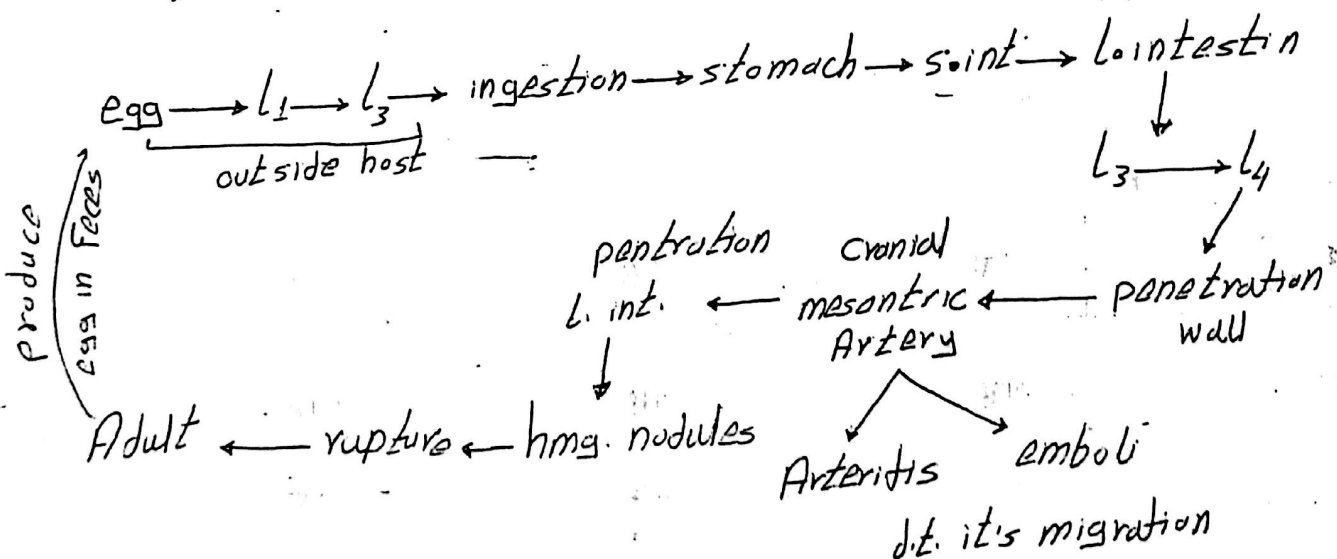
* Host ~ equine family

* source ~ contaminated food or water by infective stage "L3"

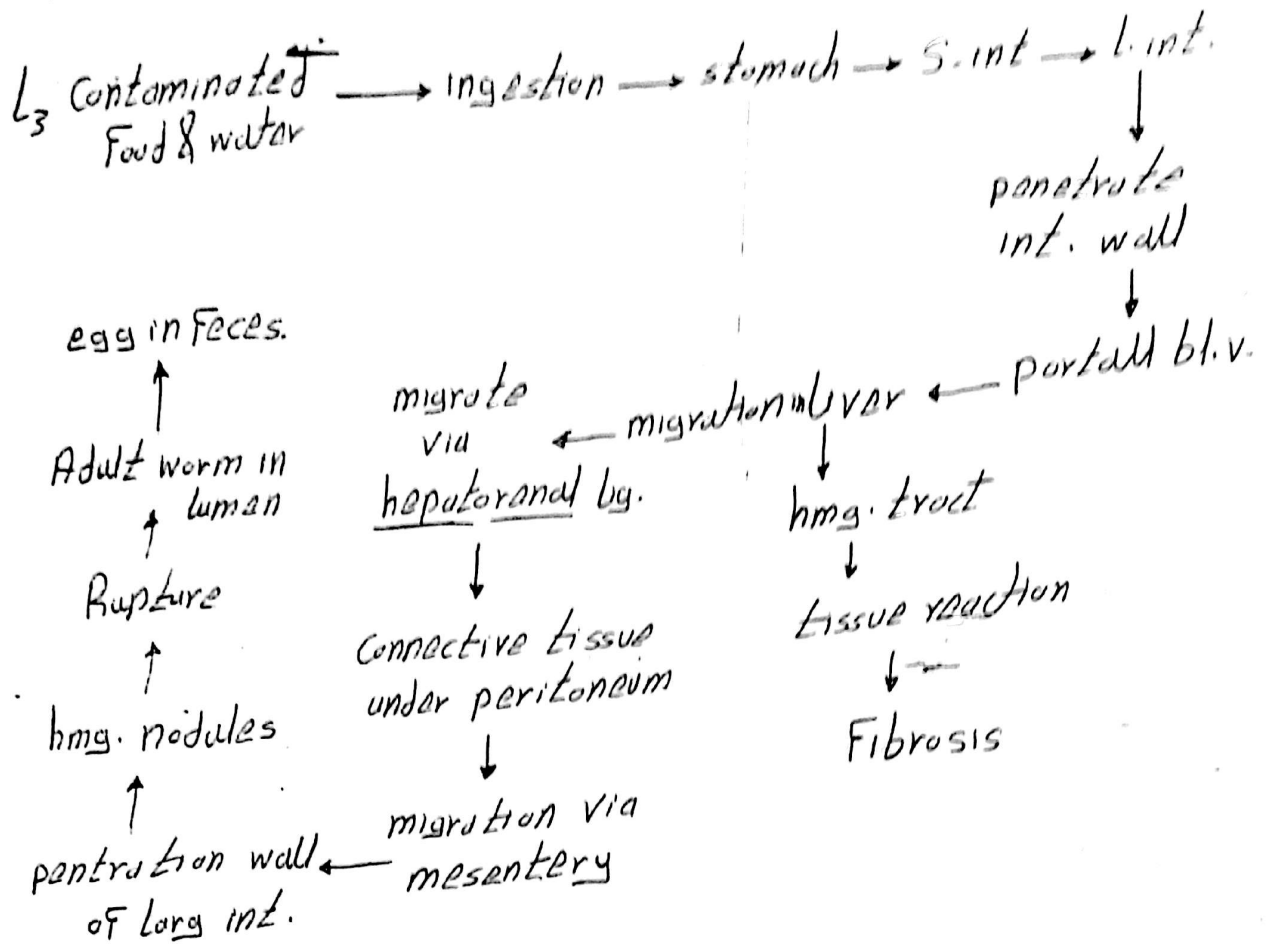
* M.O.T. ~ ingestion contaminated F. & W.

* Life cycle ~ direct

A) S. Vulgaris ~



B) S. edentatus



* Clinical signs

A) acute

- 1- Pyrexia, anorexia & loss of condition
- 2- acute enteritis
- 3- disturbance in digestive tract ~ a) colic b) diarrhea c) constipation
- 4- signs of liver ~~intest~~ inflammation.
- 5- IF Arteritis of hind limb → lameness.
- 6- death d.t. dehydration

B) chronic

- 1- pregnant ♀ → abortion
- 2- anemic
- 3- Ventral edema "hypoproteinaemia → Leakage plasma → ventral edema"

P.m

- 1- present parasite in colon
2. Adult & Larva migration
3. severe congestion in wall of Artery
4. hemorrhagic nodules in colon & sub peritoneal tissue
5. embolism & thrombosis

* diagnosis ~

A) Field diagnosis ~ signs & P.m

B) Lab. ~ ~

sample ~ [I] Fecal



منه
تبعي
المقنا
صورة الوجة
تسا عن
Cobc

ex. For strongylid eggs
* For definitive identification ~

↓

Larval culture

[2] blood ~

- ↓ Hb, RBCs & PCV
- hypo albumin
- eosinophilia

c) D.D. From Diseases cause → diarrhea
constipation
nutritional deficiency

* III ~

1) Anthelmintic ~

→ orally is effective against → Adult → migration Larva
immature → hypobiotic

I) oxfendazole - single dose
- 10 mg / kg B.wt
- against migration S. vulgaris

II) Fenbendazole ~ * dose → 60 mg / kg B.wt → single dose
→ 10 mg / kg B.wt → Five day
* against migrating → S. vulgaris
→ S. edentatus

(3)

Ivermectin 0.2mg/kg B.wt s/c
↓
dectomox 1cc/50kg I/M, s/c

2) antithrombic ~ aspirin or heparin ← 80-100 Iu/kg B.wt I/V

3) +++ diarrhea ~ ~~Kaol~~ kaolin & pectin
~ ~~bism~~ bismuth subsalicylate] → orally

4) Anti-infl. NSAIDs

5) dehydration +++ ~ I/V Fluid administration

* prevention & control ~

- 1- regular removal manure 2-3 times/w.
- 2- ~ prophylactic dose from anti parasitic D.
- 3- ~ Fecal examination
- 4- balanced Nutrition
- 5- add ponmth "anti-parasitic" in Ration



"Camel Diseases"

selg

Introduction

* Temp:- 35.7 - 38.9

* R.R:- 5 - 12

* Rumen:- 3-4 / 5 min

* Pulse:- \rightarrow Post tibial 45-50 / 1 min
 \rightarrow medio saeral

(I) Surra Disease (trypanosomiasis)

etiology:- * T. evansi \rightarrow Surra.D in equine & camel
 $\left\{ \begin{array}{l} \text{Extra cellular} \\ \text{replication in Blood \& Body fluids.} \end{array} \right.$

Distribution

Source:- * infected A' * Carrier A' \rightarrow sheep
 \rightarrow goat
 \rightarrow cattle

Mode of Trans.

- * insect (mechanical)
- * Blood transfusion
- * dog (ingestion) of inf. A'

Factor. Aff. : * all Camels are Susceptible
* Summer Season
*

E. Penury : * Emaciated Animal
* ↓ Wool & milk, reproduction
* Cause skin defect
* ↓ Performance in Race Animal.

Susceptible : * Camel → Horse → donkey → dogs.
*

Pathogenesis :

* insect → m.o → susc. A → Propagate by binary fission
→ Consume glucose → ↑ Pyruvate → Blood Acidosis
m.o → Rupture of RBCs → ↑ R.R & ↑ T.O.C
m.o → Injury intima → Ventral Edema
m.o → spleen & B. marrow → maturation
→ hyperplasia
lung, lung edema & H. failure → Death

Clinical Signs:

- I.P. (7-15 day)
- morb. = 2%.
- mortality = 100% if not treated.

→ Acute :-

- * fever.
- * ventral. edema → Hind limb, scrotum
- * lung edema → Death
- * ↓ milk & Wool
- * Urine → Dark
→ chara. smell Pungent odor
- * decubital ulcer at Body Prominence.
- * Horse → (+) nervous signs
- * Abortion at any stage
• not specific
- * premature birth
↓
Depigment. of Perineal region -
- * Dog - lat
↳ Corneal opacity
↳ Emaciation

→ Chronic :-

- * Emaciation
- * weakness
- * Pale m.m.
- * Atrophy of thigh, gluteal. Ms.
- * Rough Coat.
- * Skin Abscessation -
↳ predispose to many

PM :-

- * h.N - spleen → Enlarged + Petechial. Hg.
- * Blood in CSF

Diagnosis

- Field :
- 1) Case Hist.
 - 2) Clin. sig
 - 3) Seasonality
 - 4) PM.

Laboratory

• Sample → Blood (ear vein)

Direct :
• thin-thick Bl. Film (~~Buffy coat~~)
↳ stained by Giemsa stain

• lab. A : As it propagate in Blood
• take Blood → microscopic Exam

indirect :
• serology → ELISA & FAT
• Bio chemical.
• Serum

Treatments

- 1) Suramin
(T. name) "naganol" → 7-10 mg/Kg strict I/V Cause (Thromb. phlebitis) if not by I/V
- 2) Quinapyramine → high cost
- 3) Diminazene Aceturate
T. name "Berenil" → 3.5-7 mg/Kg I/M

• if > 3.5 mg by I/M → Toxic Death
SIC in Camel
So Recommended → ~~2.85~~ 2.85 mg/Kg

Isonotamidium chloride :

✓ 1 mg/Kg I/M

* if taken by [1 cm s/c] Cause Cyst - Abscess

[1.5 cm s/c I/V] Cause Paralysis

So, used by [5 mg in 4% dextrose]

Control :

- (1) Detection and treatment infected animal
- (2) Prophylactic tht. of susceptible animal.
- 3) no vaccine against Surra

(*) ————— (*)

1/11

ORT

"Cut. Exanthema of Camel"

= Present in Rainy Season

Etiology = Parapox virus.

m.o.t. = Abrasion on skin
as injury in lips is predisposing Disease

Clinical signs =

- Fever
- Enlarged h.v

- Watery eye
- Hyperplasia
↓
Blister in oral Commissure
may be in eye.

- death due to hunger

D.D =

- Camel Pox (5 stages of Pox)
- Contagious skin necrosis
- dermatophilosis

Itt =

- local antiseptic
- follow up case → good feeding

Control =

- no vaccine
- may use sheep vaccine
- scab → mi

3 Camel Pox (CP)

synonym: djidri جديري

Def.:

- Contagious viral D. of Camel.
- Caused by ortho pox.
- charact. by Different stages of Pox in Face, lips, leg or generalized
- Sometime → Visceral in malignant form

etiology:

True Pox (ortho. Pox)

Killed by "Jas H"

Distribution:

الشرق الأوسط ، باكستان

M.O.T:

Direct
indirect

"may have a zoonotic importance"

Susceptibility:

- Camel
- Human

• related to stress and Poor Nutrition.

• young > adult.

Economy:

- Damage Hide
- Zoonotic imp.
- Death by malign. form.

Patho

- Virus → Host → Gain access to lesion
- typical Pox → Face ← lips ← eye → Diffuse edema
- Visceral form in young

Signs

- low mortality
- mild fever

• vesicle form

↓
pruritis → A rub itself (Hindlimb) → injury

• typical Pox lesion

macule → Papule → vesicle → pustule → scab

on test, Perineum, inner aspect of thigh

• ch by

→ Head edema
 ↓
 D.D CP
→ Enlarged L.N → ORF

↓
Skin infection

PM

emaciation

typical Pox

malignant form → internal organ → Trachea
→ lung
→ other organs.

Diagnosis:

(*) Field

(*) lab. test.

D.D.

- (1) Parapox
- (2) Papillomatosis
- (3) Contag. skin necrosis
- (4) ring worm

Sample → Scabs

Hist. pathology → ICIB

E.M → For Diff. from CORF

Serology → ELISA, VNT

CAM → Rock lesion

Prognosis:

Favourable if not malignant.

Ut:

- no specific th.
- Topical Antibiotic "spray" "Alomycin"
- Antihistamine "Avil" Amp / 70 kg
- Kenney on lesion.

Control:

Camel owners protect their camel calves by

Scab → grinding + milk → "Suspension"

(*) scratch labial surface then rubbing it with suspension

(*) in case of Contagious Exanthema in sheep

↳ apply suspension in inner aspect of thigh.

(*) Contagious skin necrosis (*)

Synonyms - "Staph. Dermatitis" "Jhooling"
"Contag. skin Abscess"

def - chronic infectious Disease, affect. Camel
Caused by Staph. Aureus.
character by - superficial inflammation of skin
- ulcer - Death of skin tissue.

etiology - (1) Staph. Aureus.
(2) Actinomyces, Pyogens, Coryn. } multifactorial Disease.
(3) E. coli - Klebsiella

m.o.t - Skin Abrasion

susceptibility - Camel (Young > adult)

clinical signs - (1) Hot Painful Swelling → Raw Patches
→ diffuse Fluid from skin
→ sloughing → gangrenous myositis
2) Pyoderma or abscess
3) Skin myiasis

Th 2. (* No specific th.

(* Sulphur (100mg) + Vaselin (900mg) → remove necrosis

↓
(2) apply sulphur + Vaselin

(* use Kmno₄ + T. iodine

• may use [iodine + glycerin]
50 : 50 → to increase contact of iodine with skin

(* Broad spectrum Antibiotic.

Prevention :-

- Separation
- disinfectant
- Avoid skin myiasis

<u>Ringworm</u>	<u>mange</u>	<u>Ex. Parasite</u>
- no itching	- itching	= Biotox (th)
- Circumscribed area of Alopecia	- Alopecia	
- Diagnosis skin scrub ↓ Hyphae + spore.	- Diagnosis skin scrub ↳ mites under microsc. pe.	
- th. is Grise Fulvin is avoided in th.	(* th. A' (* Envir. management (* Equip. Hygiene	